

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 October 2000 (05.10.2000)

PCT

(10) International Publication Number
WO 00/58715 A3

(51) International Patent Classification⁷: G01N 21/64

(21) International Application Number: PCT/GB00/01050

(22) International Filing Date: 27 March 2000 (27.03.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
9906929.6 26 March 1999 (26.03.1999) GB

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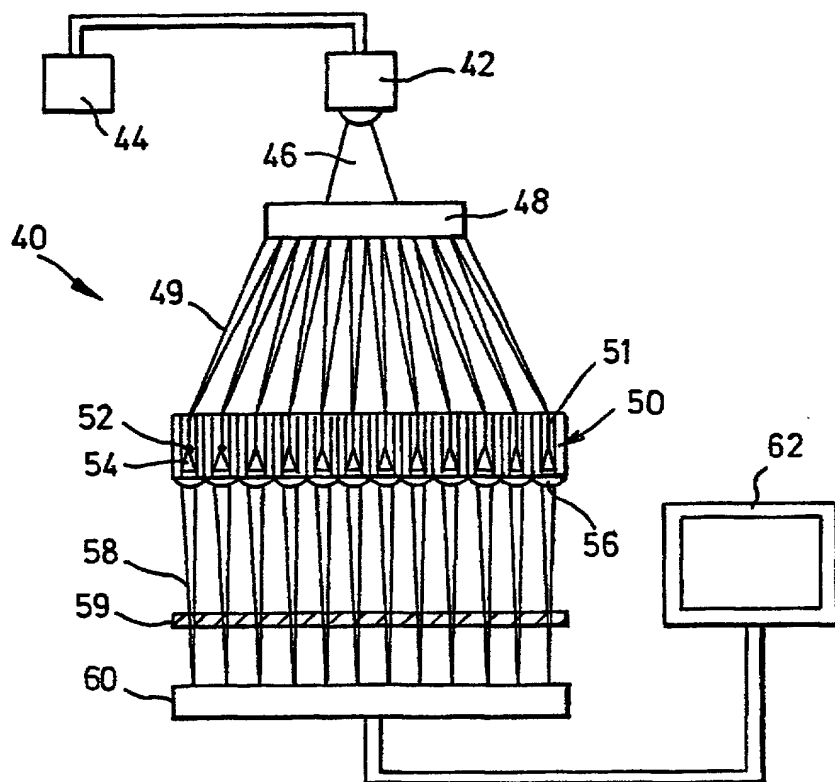
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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

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(54) Title: ASSAY SYSTEM



(57) Abstract: A method and apparatus are disclosed for performing multiple biochemical assays simultaneously. The apparatus (40) includes a laser light source (42), a diffraction grating (48) to diffract the light into multiple excitation beams, a sample holder (50) containing multiple samples (52) to be assayed, and a detection device (60) for detecting radiation either emitted or transmitted by the samples. The invention has application in fluorescence assays, or absorbance assays such as ELISAs. Also disclosed are sample holders for use in the method described, and diffraction gratings. A further modification describes the use of the method for generating DNA chips and the like by photochemistry.

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(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(88) **Date of publication of the international search report:**
8 March 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *With international search report.*

